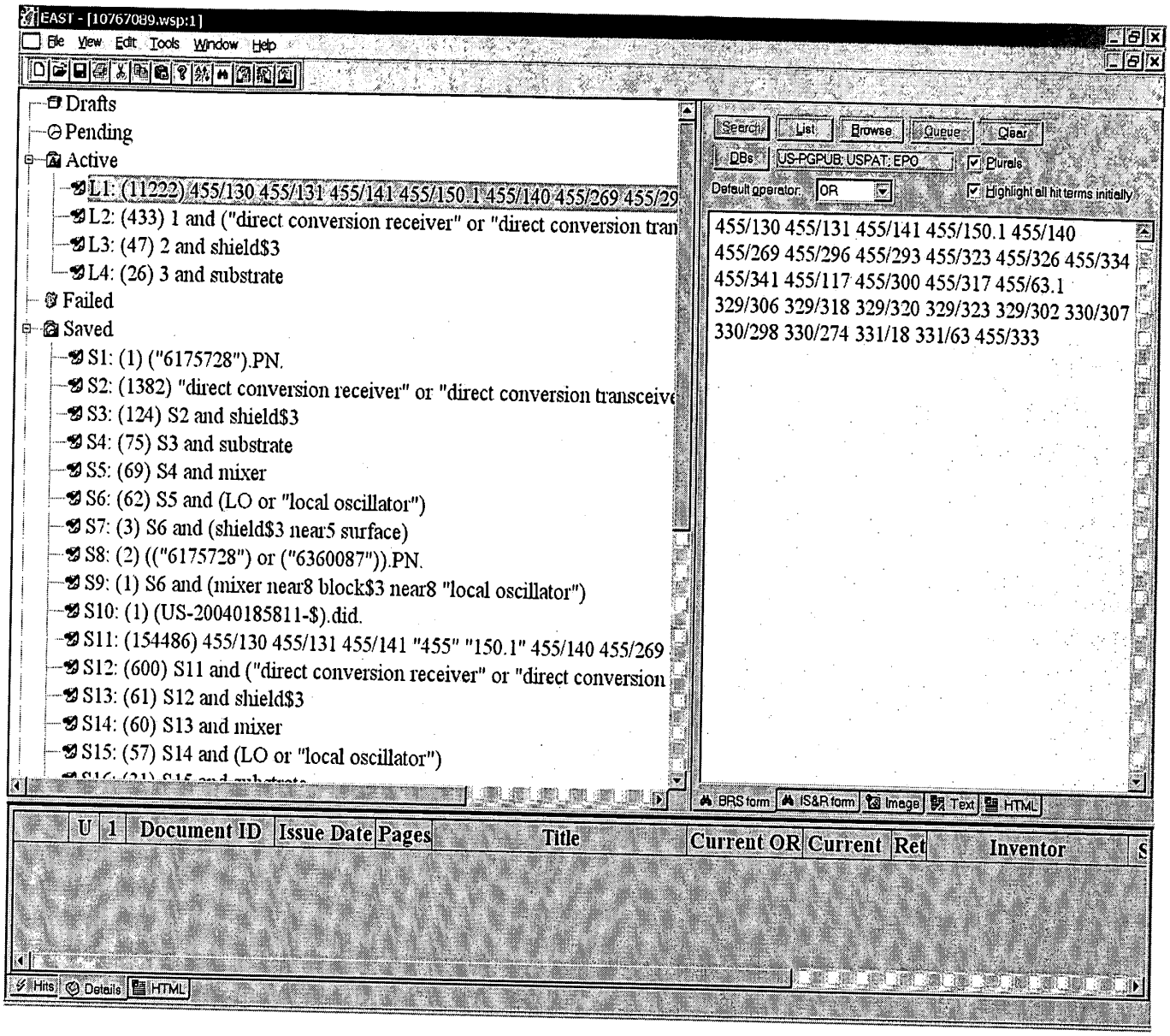
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L4: (26) 3 and substrate
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S5: (69) S4 and mixer
S6: (62) S5 and (LO or "local oscillator")
S7: (3) S6 and (shield$3 near5 surface)
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455/269 455/296 455/293 455/323 455/326 455/334
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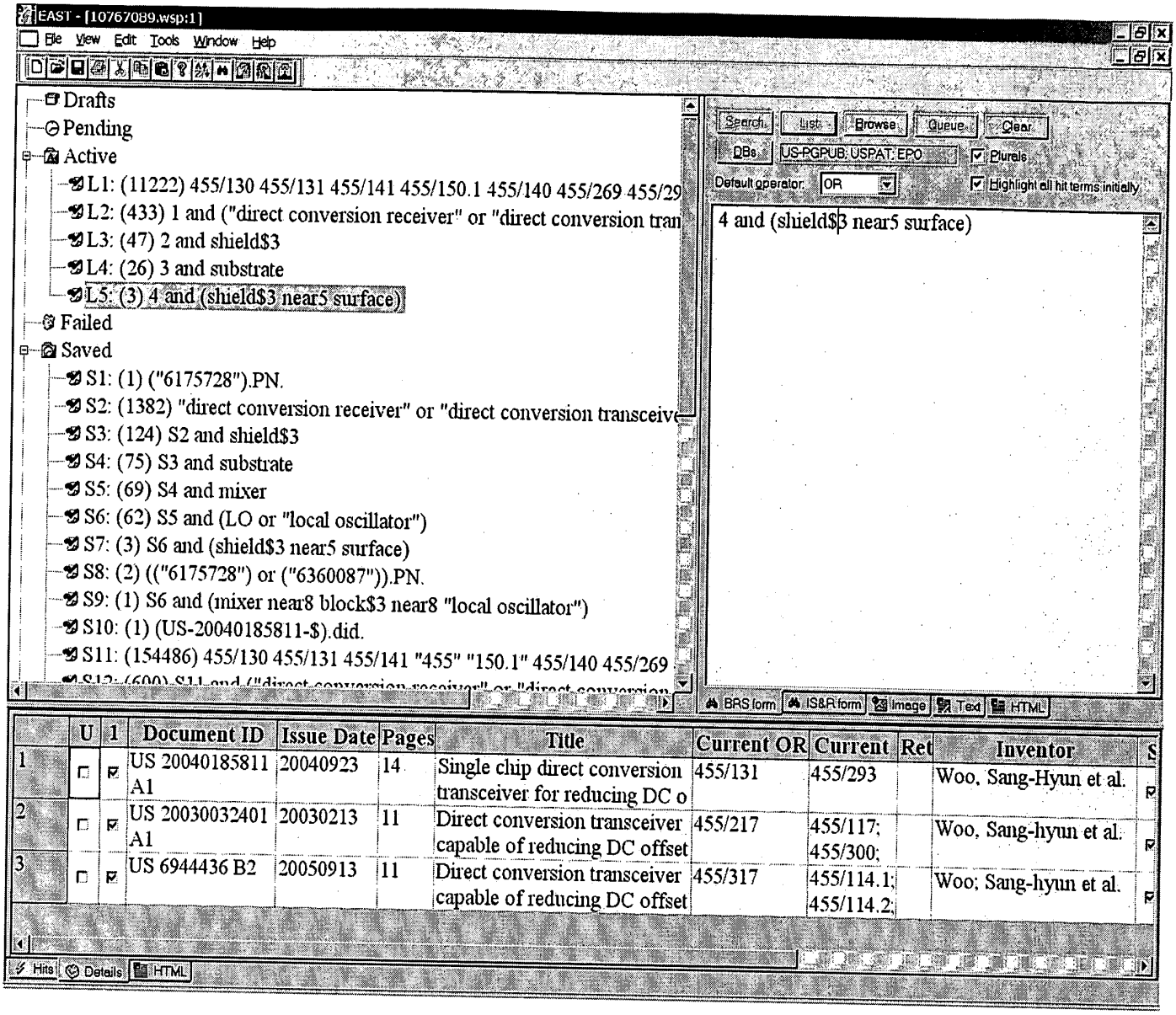
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S11: (154486) 455/130 455/131 455/141 "455" "150.1" 455/140 455/269
Search List Browse Queue Clear
DBs US-PGPUB; USPAT; EPO
Plurals
Default operator: OR
Highlight all hit terms initially
4 and (shield$3 near5 surface)
BRS form IS&R form Image Text HTML
U 1 Document ID Issue Date Pages Title Current OR Current Ref Inventor
1 US 20040185811 A1 20040923 14 Single chip direct conversion transceiver for reducing DC o 455/131 455/293 Woo, Sang-Hyun et al.
2 US 20030032401 A1 20030213 11 Direct conversion transceiver capable of reducing DC offset 455/217 455/117; 455/300; Woo, Sang-hyun et al.
3 US 6944436 B2 20050913 11 Direct conversion transceiver capable of reducing DC offset 455/317 455/114.1; 455/114.2; Woo; Sang-hyun et al.
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  - L3: (47) 2 and shield$3
  - L4: (26) 3 and substrate
  - L5: (3) 4 and (shield$3 near5 surface)
  - L6: (3) 4 and shield$3.clm.
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  - L8: (1) 7 and "positive hole".clm.
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  - S4: (75) S3 and substrate
  - S5: (69) S4 and mixer
  - S6: (62) S5 and (LO or "local oscillator")
  - S7: (3) S6 and (shield$3 near5 surface)
  - S8: (2) (("6175728") or ("6360087")).PN.
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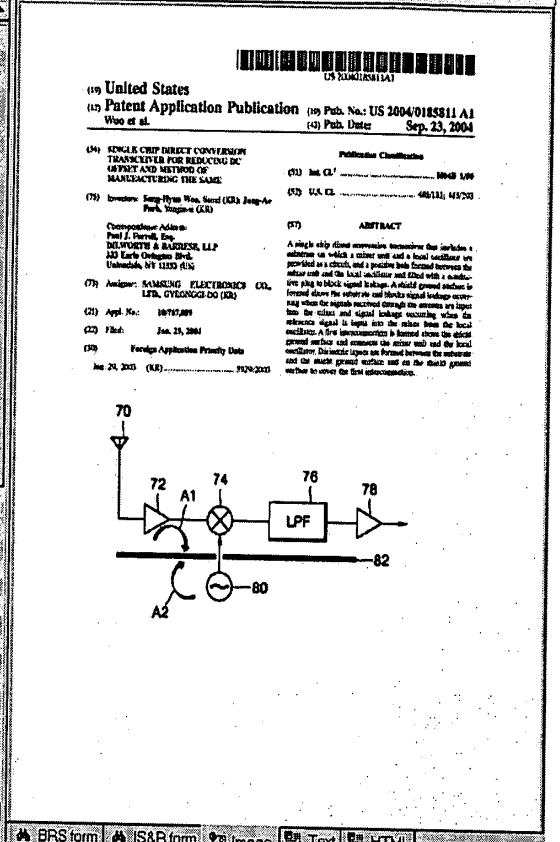
  - S12: (600) S11 and ("direct conversion receiver" or "direct conversion



US 20040185811A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2004/0185811 A1

Woo et al. (43) Pub. Date: Sep. 23, 2004

(54) SINGLE CHIP DIRECT CONVERSION TRANSCEIVER FOR REDUCING DC OFFSET AND METHOD OF MANUFACTURING THE SAME

Publication Classification

(51) Int. Cl.[7] H04B 1/00

(52) U.S. Cl. 455/131; 455/293

(75) Inventors: Sang-Hyun Woo, Seoul (KR); Jong-Ae Park, Yongin-si (KR)

Correspondence Address:
Paul J. Farrell, Esq.
DILWORTH & BARRESE, LLP
333 Earle Ovington Blvd.
Uniondale, NY 11553 (US)

(73) Assignee: SAMSUNG ELECTRONICS CO., LTD., GYEONGGI-DO (KR)

(21) Appl. No.: 10/767,089

(22) Filed: Jan. 28, 2004

(30) Foreign Application Priority Data

Jan 29, 2003 (KR) 5929/2003

(57) ABSTRACT

A single chip direct conversion transceiver that includes a substrate on which a mixer unit and a local oscillator are provided as a circuit, and a positive hole formed between the mixer unit and the local oscillator and filled with a conductive plug to block signal leakage. A shield ground surface is formed above the substrate and blocks signal leakage occurring when the signals received through the antenna are input into the mixer and signal leakage occurring when the reference signal is input into the mixer from the local oscillator. A first interconnection is formed across the shield ground surface and connects the mixer unit and the local oscillator. Dielectric layers are formed between the substrate and the shield ground surface and on the shield ground surface to cover the first interconnection.

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	U	1	Document ID	Issue Date	Pages	Title	Current OR	Current	Ref	Inventor	S
1	☐	☑	US 20040185811 A1	20040923	14	Single chip direct conversion transceiver for reducing DC o	455/131	455/293		Woo, Sang-Hyun et al.	☑

Hits | Details | HTML

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- L4: (75) 3 and substrate
- L5: (69) 4 and mixer
- L6: (62) 5 and (LO or "local oscillator")
- L7: (3) 6 and (shield$3 near5 surface)
- L8: (2) (("6175728") or ("6360087")).PN.
- L9: (1) 6 and (mixer near8 block$3 near8 "local oscillator")
- L10: (1) (US-20040185811-$).did.
- L11: (154486) 455/130 455/131 455/141 "455" "150.1" 455/140 455/2(
- L12: (600) 11 and ("direct conversion receiver" or "direct conversion
- L13: (61) 12 and shield$3
- L14: (60) 13 and mixer
- L15: (57) 14 and (LO or "local oscillator")
- L16: (31) 15 and substrate
- L17: (3) 16 and (shield$3 near5 surface)
- L18: (10928) 455/130 455/131 455/141 455/150.1 455/140 455/269 45
- L19: (1047) 455/130 455/131 455/141 455/150.1 455/140 455/269 455
- L20: (31) 19 and ("direct conversion receiver" or "direct conversion
- L21: (2) 20 and shield$3.clm.
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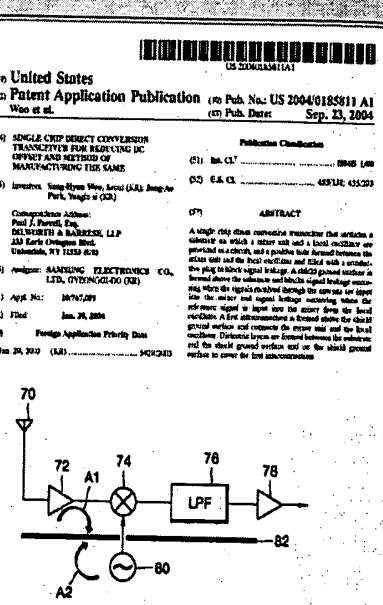

US 20040185811A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2004/0185811 A1

Woo et al. (43) Pub. Date: Sep. 23, 2004

(54) SINGLE CHIP DIRECT CONVERSION TRANSCEIVER FOR REDUCING DC OFFSET AND METHOD OF MANUFACTURING THE SAME

Publication Classification

(51) Int. Cl.[7] H04B 1/00

(52) U.S. Cl. 455/131; 455/293

(75) Inventors: Sang-Hyun Woo, Seoul (KR); Jong-Ae Park, Yongin-si (KR)

Correspondence Address:
Paul J. Farrell, Esq.
DILWORTH & BARRESE, LLP
333 Earle Ovington Blvd.
Uniondale, NY 11553 (US)

(73) Assignee: SAMSUNG ELECTRONICS CO., LTD., SUWON-CITY (KR)

(21) Appl. No.: 10/767,089

(22) Filed: Jan. 28, 2004

(30) Foreign Application Priority Data

Jan. 28, 2003 (KR) 2003-5243

(57) ABSTRACT

A single chip direct conversion transceiver that includes a substrate on which a mixer unit and a local oscillator are provided as a circuit, and a parallel hole formed between the mixer unit and the local oscillator and filled with a conductive plug to block signal leakage. A shield ground surface is formed above the substrate and blocks signal leakage occurring when the signals received through the antenna are input into the mixer and signal leakage occurring when the reference signal is input into the mixer from the local oscillator. A first interconnection is formed above the shield ground surface and connects the mixer unit and the local oscillator. Dielectric layers are formed between the substrate and the shield ground surface and on the shield ground surface to cover the first interconnection.

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	U	1	Document ID	Issue Date	Pages	Title	Current OR	Current	Ref	Inventor	S
1	☐	☑	US 20040185811 A1	20040923	14	Single chip direct conversion transceiver for reducing DC o	455/131	455/293		Woo, Sang-Hyun et al.	☑

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- L4: (75) 3 and substrate
- L5: (69) 4 and mixer
- L6: (62) 5 and (LO or "local oscillator")
- L7: (3) 6 and (shield$3 near5 surface)
- L8: (2) (("6175728") or ("6360087")).PN.
- L9: (1) 6 and (mixer near8 block$3 near8 "local oscillator")
- L10: (1) (US-20040185811-$).did.
- L11: (154486) 455/130 455/131 455/141 "455" "150.1" 455/140 455/269
- L12: (600) 11 and ("direct conversion receiver" or "direct conversion ti
- L13: (61) 12 and shield$3
- L14: (60) 13 and mixer
- L15: (57) 14 and (LO or "local oscillator")
- L16: (31) 15 and substrate
- L17: (3) 16 and (shield$3 near5 surface)
- L18: (10928) 455/130 455/131 455/141 455/150.1 455/140 455/269 455/2
- L19: (1047) 455/130 455/131 455/141 455/150.1 455/140 455/269 455/29
- L20: (31) 19 and ("direct conversion receiver" or "direct conversion tra
- L21: (2) 20 and shield$3.clm.
- L22: (2) 21 and (shield$3 near5 surface).clm.
- L23: (1) 22 and "dielectric layer".clm.
- L25: (1) 22 and "positive hole".clm.

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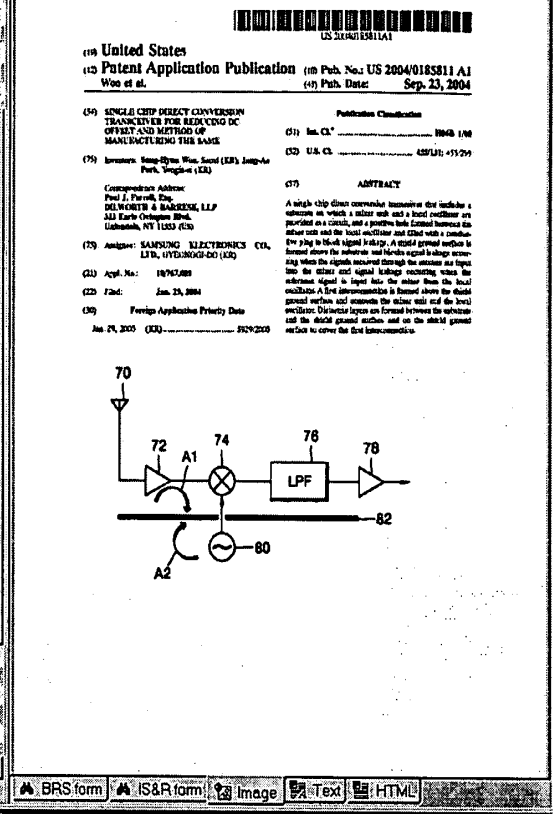

(19) United States
(12) Patent Application Publication (10) Pub. No.: US 2004/0185811 A1
Woo et al. (43) Pub. Date: Sep. 23, 2004

(54) SINGLE CHIP DIRECT CONVERSION TRANSCEIVER FOR REDUCING DC OFFSET AND METHOD OF MANUFACTURING THE SAME

(75) Inventors: Sang-Hyun Woo, Seoul (KR); Jong-Ae Park, Yongin-si (KR)

Correspondence Address:
Paul J. Farrell, Esq.
DILWORTH & BARRESE, LLP
333 Earle Ovington Blvd.
Uniondale, NY 11553 (US)

(73) Assignee: SAMSUNG ELECTRONICS CO., LTD., SUWON-SHI (KR)

(21) Appl. No.: 10/767,089

(22) Filed: Jan. 29, 2004

(30) Foreign Application Priority Data

Jan. 29, 2003 (KR) 2003-6206

Publication Classification

(51) Int. Cl.[7] H04B 1/40

(52) U.S. Cl. 455/130; 455/131; 455/293

(57) ABSTRACT

A single chip direct conversion transceiver that includes a substrate on which a mixer unit and a local oscillator are provided as a circuit, and a positive hole formed between the mixer unit and the local oscillator and filled with a conductive plug to block signal leakage. A shield ground surface is formed above the substrate and blocks signal leakage occurring when the signals received through the antenna as input into the mixer and signal leakage occurring when the reference signal is input into the mixer from the local oscillator. A first interconnection is formed above the shield ground surface and connects the mixer unit and the local oscillator. Dielectric layers are formed between the substrate and the shield ground surface and on the shield ground surface to cover the first interconnection.

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1	☐	☑	US 20040185811 A1	20040923	14	Single chip direct conversion transceiver for reducing DC o	455/131	455/293		Woo, Sang-Hyun et al.	☑
2	☐	☑	US 20030032401 A1	20030213	11	Direct conversion transceiver capable of reducing DC offset	455/217	455/117; 455/300;		Woo, Sang-hyun et al.	☑

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  - L5: (69) 4 and mixer
  - L6: (62) 5 and (LO or "local oscillator")
  - L7: (3) 6 and (shield$3 near5 surface)
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  - L17: (3) 16 and (shield$3 near5 surface)
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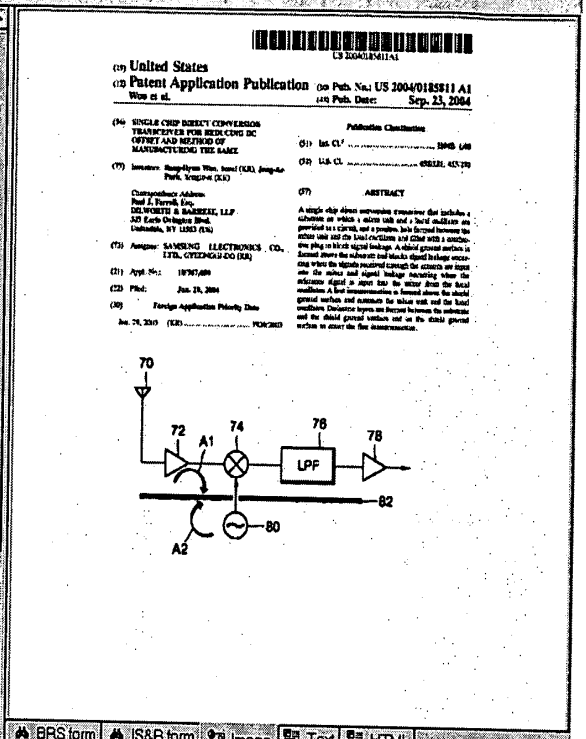

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3	☐	☑	US 6944436 B2	20050913	11	Direct conversion transceiver capable of reducing DC offset	455/317	455/114.1; 455/114.2;		Woo; Sang-hyun et al.	☑

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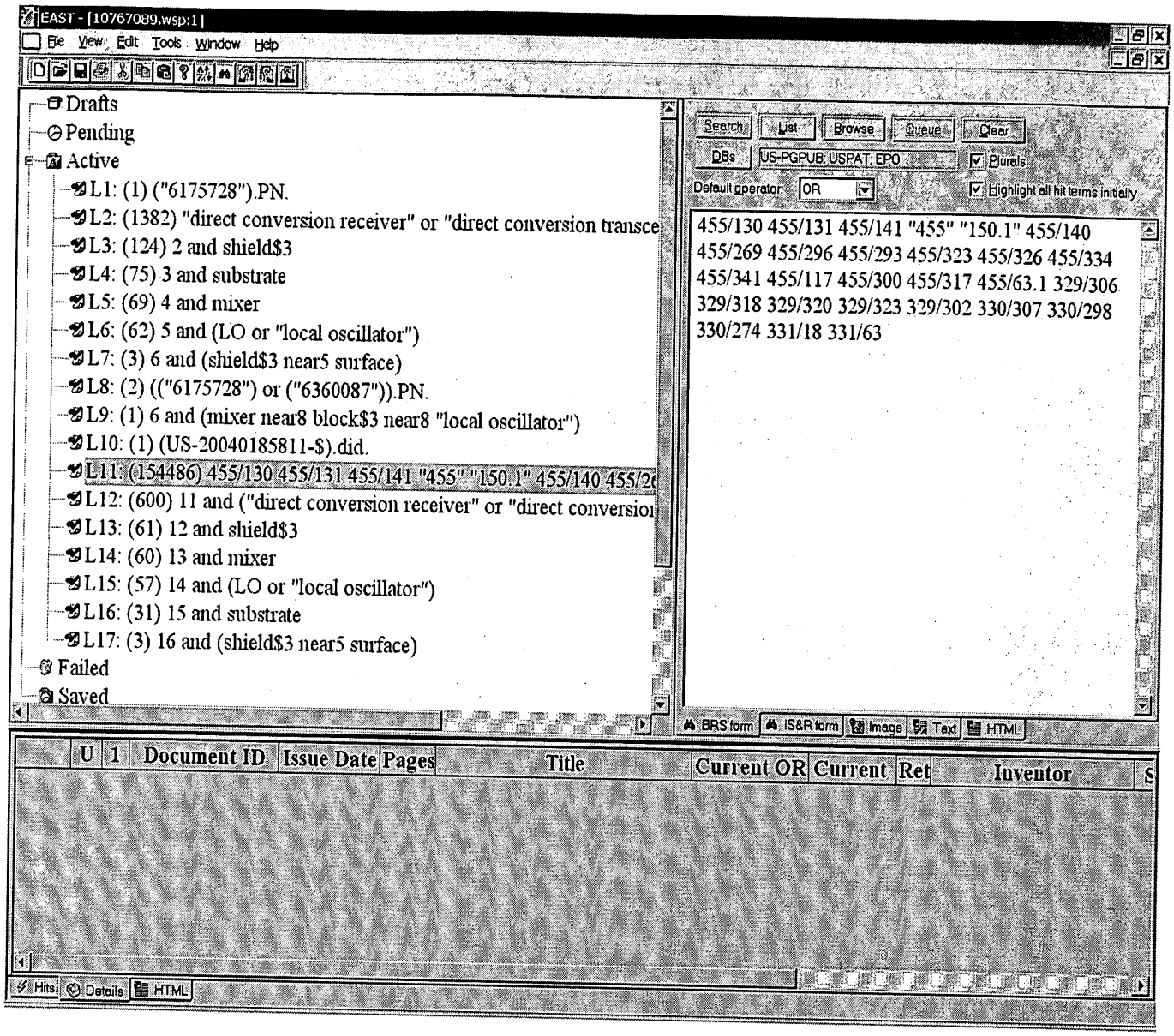
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US 20040185811A1

(19) **United States**

(12) **Patent Application Publication** (10) Pub. No.: US 2004/0185811 A1

Woo et al. (43) Pub. Date: Sep. 23, 2004

(54) SINGLE CHIP DIRECT CONVERSION TRANSCEIVER FOR REDUCING DC OFFSET AND METHOD OF MANUFACTURING THE SAME

(75) Inventors: Sang-Hyun Woo, Seoul (KR); Jongwha Park, Yongin-si (KR)

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(73) Assignee: SAMSUNG ELECTRONICS CO., LTD., GYEONGGI-DO (KR)

(21) Appl. No.: 10/767,089

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Jan. 29, 2003 (KR) 5929/2003

Publication Classification

(51) Int. Cl.[7] H04B 1/00

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(57) ABSTRACT

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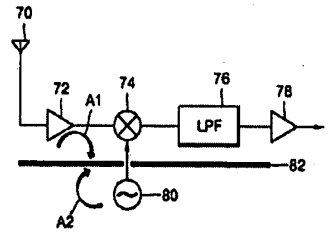

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	U	1	Document ID	Issue Date	Pages	Title	Current OR	Current	Ret	Inventor	S
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